CLAIMS:

1. An article of manufacture for obtaining automatic actions through a network using processing circuitry for connecting to the network and detection circuitry for providing input signals to the processing circuitry, the automatic actions being provided by action devices connected to the network; the article comprising:

an area of a marking medium; and

machine-readable markings within the area of the marking medium that encode an action/medium identifier; the machine-readable markings being decodable to obtain the action/medium identifier by the processing circuitry using input signals from the detection circuitry, the input signals including information defining the machine-readable markings; the action/medium identifier identifying an action and being usable by the processing circuitry to obtain an action identifier that the processing circuitry can provide through the network to an action device to produce the action; the action device providing the action automatically in response to the action identifier; the action/medium identifier further identifying the marking medium.

2. The article of claim 1 in which the action/medium identifier includes a globally unique identifier of the area of the marking medium.

3. The article of claim 1 in which the detection device is an image input device and the machine-readable markings that encode the action/medium identifier are invisible.

4. The article of claim 1 in which the detection device is an image input device and the machine-readable markings are visually nonobstructive markings.

5. The article of claim 1 in which the area of the marking medium is a page and the action/medium identifier includes a page identifier that identifies the page.

6. The article of claim 5 in which the action device includes digital data defining a counterpart image of the page; the action being to provide the digital data for presentation of the counterpart image of the page on a display.

7. The article of claim 6 in which the counterpart image is isomorphic with the page.

8. The article of claim 5 in which the action/medium identifier further includes a location identifier that identifies a location of a zone within the page, the action identifier being the location identifier.

9. The article of claim 8 in which the zone includes a first section and a second section; the first section including a first set of the machine-readable markings that encode the page identifier; the second section including a second set of the machine-readable markings that encode the location identifier.

10. The article of claim 8 in which the zone further includes an orientation marking indicating orientation of the page.

11. The article of claim 1 in which the area of the marking medium is part of a hardcopy document and the action/medium identifier includes a document identifier that identifies the hardcopy document.

12. The article of claim 10 in which the action/medium identifier further includes the action identifier and the area of the marking medium includes a first position and a second position; a first set of the machine-readable markings that encode the document identifier being at the first position; a second set of the machine-readable markings that encode the action identifier being at the second position.

13. The article of claim 1 in which the area of marking medium is a sticker and the action/medium identifier includes a sticker identifier that identifies the sticker.

14. The article of claim 1 in which the action/medium identifier includes a medium identifier and an access control code derived from the medium identifier using a secret function.

15. A method of providing automatic actions through a network, the automatic actions being provided by action devices connected to the network; the method comprising:

receiving input signals from a detection device, the input signals including information defining the machine-readable markings; the area of the marking medium including machine-readable markings that encode an action/medium identifier; the action/medium identifier identifying an action and being usable to obtain an action identifier that can be provided through the network to an action device to produce the action; the action/medium identifier further identifying the marking medium;

using the input signals, decoding the machine-readable markings to obtain the action/medium identifier;

using the action/medium identifier to obtain the action identifier; and

providing the action identifier through the network to the action device for the action; the action device providing the action automatically in response to the action identifier.

16. The method of claim 15 in which the area of the marking medium is a page and the action/medium identifier includes a page identifier; the action device including digital data defining a counterpart image of the page.

17. The method of claim 16 in which the action is to provide the digital data; the method further comprising:

using the digital data to present the counterpart image of the page on a display.

18. The method of claim 17, further comprising:

receiving second input signals from the detection device, the second input signals including information defining machine-readable markings in a second area of the marking medium; the second area of the marking medium including machine-readable markings that encode a second action/medium identifier; the second action/medium identifier identifying a second action and being usable to obtain a second action identifier that can be provided through the network to the action device to produce the second action; the second action/medium identifier further identifying the marking medium and a location within the marking medium; the second action identifier identifying the location;

using the second input signals, decoding the machine-readable markings to obtain the second action/medium identifier;

using the second action/medium identifier to obtain the second action identifier; and

providing the second action identifier through the network to the action device; the action device providing the second action automatically in response to the second action identifier.

19. The method of claim 18 in which the second area of the marking medium includes human-readable markings identifying a link to a network address; the second action following the link to the network address.

20. The method of claim 15 in which action is an action that produces output data; the act of providing the action identifier through the network to the action device comprising:

providing the action/medium identifier to a first machine to obtain first and second network addresses, the first network address being a network address of the action device for the action, the second network address being a network address of a peripheral device connected to the network; and

using the first network address to provide the action identifier and the second network address to the action device; the action device responding by performing the action to obtain output data and using the second network address to provide the output data to the peripheral device.

21. The method of claim 20 in which the first machine is a router.

22. The method of claim 15 in which the action device, before providing the action, determines whether the action identifier meets a valid request criterion; the action device providing the action only if the valid request criterion is met.

23. The method of claim 15 in which the action identifier includes a medium identifier and an access control code derived from the medium identifier using a secret function; the action device, before providing the action, using the action identifier to determine whether the access control code is derived from the medium identifier using the secret function; the action device providing the action only if the access control code is derived from the medium identifier using the secret function.

24. A system for providing automatic actions through a network, the automatic actions being provided by action devices connected to the network; the system comprising:

detection circuitry for providing input signals including information defining machine-readable markings in an area of a marking medium; the area of the marking medium including machine-readable markings that encode an action/medium identifier; the action/medium identifier identifying an action and being usable to obtain an action identifier that can be provided through the network to an action device to produce the action; the action/medium identifier further identifying the marking medium; and

processing circuitry connected for receiving the input signals and connected to the network; the processing circuitry, in response to the input signals:

> using the input signals, decoding the machine-readable markings to obtain the action/medium identifier;

using the action/medium identifier to obtain the action identifier; and

providing the action identifier through the network to the action device for the action; the action device providing the action automatically in response to the action identifier.

25. The system of claim 24, further comprising a pointer; the pointer including the detection circuitry.

26. The system of claim 25 in which the pointer further includes a user input device for providing user signals; the detection circuitry providing the input signals in response to a user signal from the user input device.

27. The system of claim 25 in which the detection circuitry is image input circuitry, the input signals being image signals defining an image of the area of the marking medium.

28. The system of claim 26 in which the pointer further includes a marking element; the processing circuitry further operating to:

obtain, for a series of images defined by the input signals, time data indicating the times at which the images occurred.

29. The system of claim 25 in which the pointer is handheld.